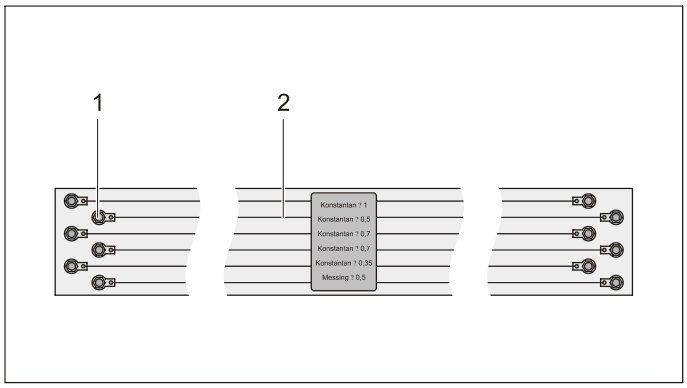
Lehr– und Didaktiksysteme
LD Didactic GmbH
Leyboldstrasse 1 · D-50354 Huerth

06/05-W97-Sel



Operating instructions 550 57

Apparatus for resistance measurements (550 57)

1 connection sockets
2 resistance wires

1 Description

The apparatus for resistance measurements is used for demonstrating Ohm's law and for verifying the dependency of the resistance on the length, cross-sectional area and conductor material.

2 Technical data

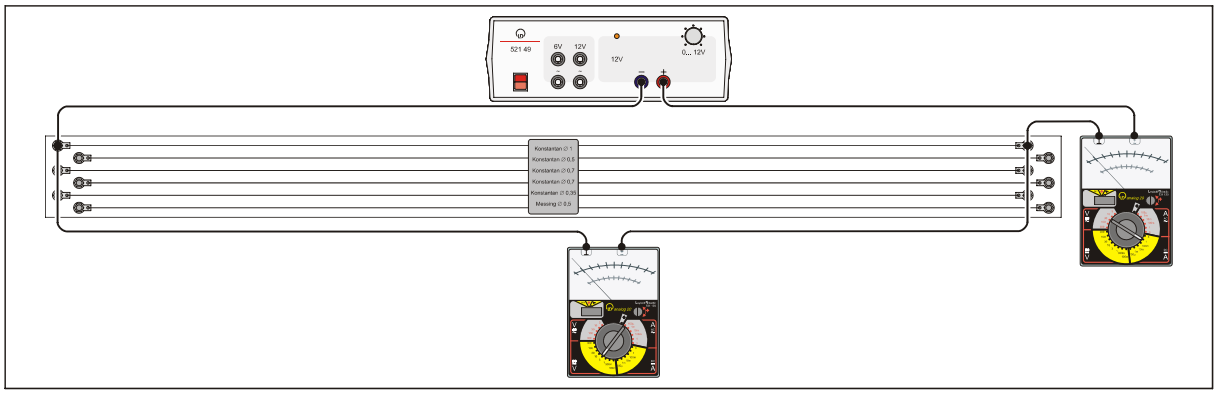
Wire length:	1 m
Dimensions:	30 cm × 12 cm × 3 cm
Mass:	3.5 kg

3 Operation

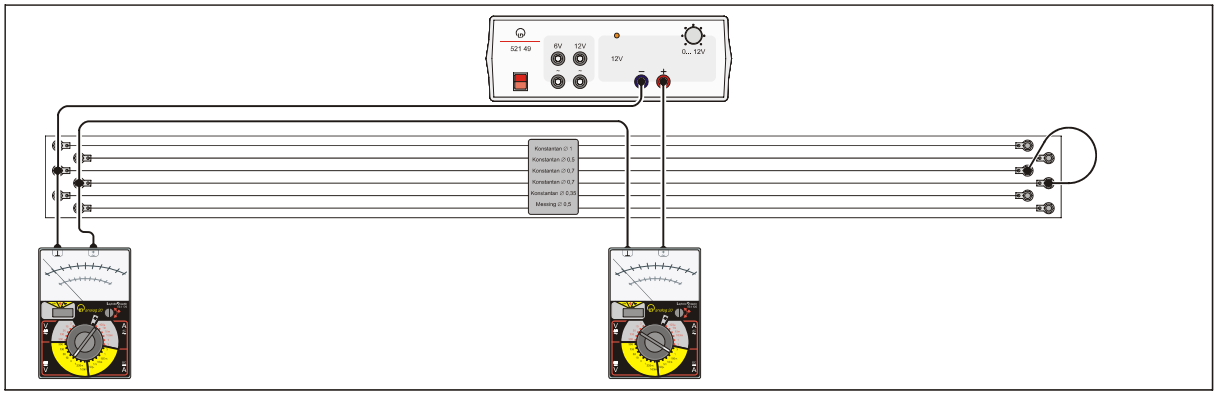
also required:

1 AC/DC power supply		521 49
1 Ammeter, DC, $I \leq 3$ A	e.g.	531 120
1 Voltmeter, DC, $U \leq 15$ V	e.g.	531 120

Measurements with individual wires



Series connection of the two constantan wires



4 Resistance wires

Number	Resistance wire	Material	Specific resistance	Diameter	Cross-section	Resistance	Maximum voltage	Maximum current
1	Constantan ∅ 1	Constantan (56% Cu, 44% Ni)	0.49 $\frac{\Omega\,mm^2}{m}$	1.0 mm	0.8 mm^2	0.62 Ω	2.0 V	3.3 A
2	Constantan ∅ 0.7			0.7 mm	0.4 mm^2	1.3 Ω	2.5 V	2.1 A
1	Constantan ∅ 0.5			0.5 mm	0.2 mm^2	2.5 Ω	3.2 V	1.3 A
1	Constantan ∅ 0.35			0.35 mm	0.1 mm^2	5.1 Ω	4.0 V	0.8 A
1	Brass ∅ 0.5	Brass (63% Cu, 37% Zn)	0.065 $\frac{\Omega\,mm^2}{m}$	0.5 mm	0.2 mm^2	0.33 Ω	1.5 V	4.0 A

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